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EXAMINER

LU, KUEN S

ART UNIT

PAPER NUMBER

2167

DATE MAILED: 11/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/998,225

Applicant(s)

ABE ET AL.

Examiner

Kuen S Lu

Art Unit

2167

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 01 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>#1 6/15/04</u> . | 6) <input checked="" type="checkbox"/> Other: <u>IDS #2 8/12/04</u> . |

Supplemental – Non-Final

DETAILED ACTION

Response to Amendments

1. The Applicant's REMARKS filed on July 1, 2004 are noted. Applicant pointed out the discrepancy between the Cusson et al. (hereafter "Cusson") reference and its U.S. Patent number (6,385,605). Applicant's REMARKS about the error is appreciated. In this Supplemental non-Final Office Action, the Examiner has corrected the error and the reference should now read Cusson et al. (U.S. Patent 6,487,641, hereafter "Cusson").
2. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.
3. Please refer to the Supplemental non-Final Office Action shown next concerning the rejection of claims 1 through 24, where claims 23-24 are currently amended.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-4, 6-9, 11-14, 16-20 and 22 are rejected under U.S.C. 103(a) as being unpatentable over Biderman et al. (U.S. Publication 2001/0037325, hereafter "Biderman") in view of Cusson et al. (U.S. Patent 6,487,641, hereafter "Cusson").

As per claims 1, 6, 11, 16, 17 and 22, Biderman teaches the following:

"receiving a retrieval condition, transmitted from each of the plurality of terminal devices together with terminal device information for designation of each of the terminal devices, including a retrieval pattern and a retrieval expression for retrieval of data to be searched" (See Page 5, [0053]-[0058] wherein Biderman's database servers receive web navigation request, a retrieval condition, from web surfers in the forms of URLs and keywords which are transmitted from the client machines to the servers via the web server and the client machine information is retrieved by the servers for returning the matching entries to the client to display is equivalent to Applicant's receiving a retrieval condition, transmitted from each of the plurality of terminal devices together with terminal device information for designation of each of the terminal devices, including a retrieval pattern and a retrieval expression for retrieval of data to be searched);

"storing the received retrieval condition and the terminal device information" (See Page 5, [0057]-[0058] wherein Biderman's client machine information is retrieved for returning the matching entries to display, and the retrieval condition and the navigation string are parsed for extracting protocol, host name, port, path, and search string for keywords and categories are extracted to store in the navigation and search databases is equivalent to Applicant's storing the received retrieval condition and the terminal device information)

Biderman does not specifically teach storing the retrieval condition in a retrieval condition buffer.

However, Cusson teaches queryable cache and cached data (See Fig. 2 and col. 5, lines 48-52 wherein Cusson's storing query in the queryable cache is equivalent to Applicant's storing the retrieval condition in a retrieval condition buffer).

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine Cusson's reference with Biderman's by implementing cache as an extended storage device and a logic determining tool such that the cache could have kept information for answering frequently made queries and returning result more quickly by avoiding the overhead of the hops of the data access such that the performance of Biderman's system would have been improved for serving a plurality of web surfers.

Biderman further teaches the following:

"determining whether or not a preceding retrieving process is being performed" (See Page 5, [0058] wherein Biderman's the navigation and search databases server determines if the URL in the navigation string ever visited and keywords ever searched previously is equivalent to Applicant's determining whether or not a preceding retrieving process is being performed);

"when it is determined that the preceding retrieving process is not being performed, generating a retrieval pattern variable table in which a retrieval pattern and a first variable having the retrieval pattern as a value are associated with each other if there are two or more identical retrieval patterns in the retrieval patterns stored in the retrieval

condition buffer, excluding retrieval patterns other than one retrieval pattern" (See Page 5, [0058] wherein Biderman's storing the navigation string information in the navigation database if the URL has not been visited before and saving the new keywords in the search database is equivalent to Applicant's when it is determined that the preceding retrieving process is not being performed, generating a retrieval pattern variable table in which a retrieval pattern and a first variable having the retrieval pattern as a value are associated with each other if there are two or more identical retrieval patterns in the retrieval patterns stored in the retrieval condition buffer, excluding retrieval patterns other than one retrieval pattern);

"generating a retrieval request expression variable table in which the retrieval request expression indicating the retrieval pattern using the first variable and a second variable having the retrieval request expression as a value are associated, and the retrieval request expression indicating the terminal device information and the retrieval expression using the second variable and the second variable having the retrieval request expression as a value are associated based on the retrieval expression and the terminal device information stored in the retrieval condition buffer unit, and the generated retrieval pattern variable table" (See Page 5, [0061] wherein Biderman's the navigation strings and search strategies are reconstructed from extracted URLs and keywords where URL and keyword are the first and second retrieval request expression variables, respectively while client machine information is retrieved for communication is equivalent to Applicant's generating a retrieval request expression variable table in which the retrieval request expression indicating the retrieval pattern using the first

variable and a second variable having the retrieval request expression as a value are associated, and the retrieval request expression indicating the terminal device information and the retrieval expression using the second variable and the second variable having the retrieval request expression as a value are associated based on the retrieval expression and the terminal device information stored in the retrieval condition buffer unit, and the generated retrieval pattern variable table);

“extracting a retrieval result matching the retrieval condition transmitted from each of the plurality of terminal devices by searching the retrieval target database storing the data to be searched according to the generated retrieval request expression variable table” (See Page 5, [0062] wherein Biderman’s search engines search and retrieve results is equivalent to Applicant’s extracting a retrieval result matching the retrieval condition transmitted from each of the plurality of terminal devices by searching the retrieval target database storing the data to be searched according to the generated retrieval request expression variable table); and

“transmitting the extracted retrieval result to each of the plurality of terminal devices” (See Page 5, [0062] the search results are transmitted to the specific window of the user’s browser to display is equivalent to Applicant’s transmitting the extracted retrieval result to each of the plurality of terminal devices);

“a retrieval target data storage unit storing data to be searched” (See Fig. 2 wherein Biderman’s search, navigation and personal data databases is equivalent to Applicant’s a retrieval target data storage unit storing data to be searched”;

“a terminal device side transmission unit transmitting a retrieval condition containing a retrieval pattern for retrieval of data to be searched and a retrieval pattern together with terminal device information for designating each terminal device” (See Fig. 2, elements 11-14 and Page 5, [0062] wherein Biderman's the client system for users to surf the web with client machine information retrieved by the search servers for communication is equivalent to Applicant's a terminal device side transmission unit transmitting a retrieval condition containing a retrieval pattern for retrieval of data to be searched and a retrieval pattern together with terminal device information for designating each terminal device); and

“reception unit receiving the result transmitted by said transmission unit” (See Fig. 2, elements 11-14 and Page 5, [0062] wherein Biderman's the client system for users to surf the web, receive and display the results where the client machine information retrieved by the search servers for communication is equivalent to Applicant's reception unit receiving the result transmitted by said transmission unit).

As per claims 2, 7, 12 and 18, Cusson further teaches “retrieval condition buffer stores the retrieval condition until it is determined that a retrieving process is completed” (See Fig. 2, col. 3, lines 49-50 and col. 5, lines 48-52 wherein Cusson's storing query in the queryable cache and refreshing missing pages in the cache by using least recently used status is equivalent to Applicant's retrieval condition buffer stores the retrieval condition until it is determined that a retrieving process is completed).

As per claims 3, 8, 13 and 19, Cusson further teaches “retrieval condition buffer stores the retrieval condition until a predetermined time is reached or a predetermined

capacity is filled” (See Fig. 2, col. 5, lines 48-52 and col. 3, lines 37-50 wherein Cusson’s storing query in the queryable cache by using LRU algorithm to determine which data to be replaced when new data is to be cached is equivalent to Applicant’s retrieval condition buffer stores the retrieval condition until a predetermined time is reached or a predetermined capacity is filled).

As per claims 4, 9, 14 and 20, Cusson further teaches “retrieval simultaneously retrieves a plurality of retrieval patterns” (See Fig. 2, elements 203’s and col. 5, line 25 – col. 8, line 5 wherein Cusson’s a plurality of users utilize the cached query results without invoking database query should the result pages are on the cache is equivalent to Applicant’s retrieval simultaneously retrieves a plurality of retrieval patterns).

6. Claims 5, 10, 15 and 21 are rejected are rejected under U.S.C. 103(a) as being unpatentable over Biderman et al. (U.S. Publication 2001/0037325, hereafter “Biderman”) in view of Cusson et al. (U.S. Patent 6,487,641, hereafter “Cusson”), as applied to claims 1-4, 6-9, 11-14, 16-20 and 22, and further in view of Sundaresan (U.S. Patent 6,487,566).

As per claims 5, 10, 15 and 21, the combined Cusson-Biderman reference teaches pattern retrieval from a plurality of users on a network environment as described in Item 1.

The combined reference does not specifically teach “retrieval is performed in one of an Aho-Corasick (AC) method, an Expanded-Boyer-Moore (EBM) method, and a Shinohara-Arikawa (SA) method”.

However, Sundaresan teaches pattern matching logic by using Aho-Corasick method as illustrated in Fig. 3, steps 300-322 where XML file is received, transformed and generated.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine Sundaresan's teaching with the combined Cusson-Biderman reference by implementing the Aho-Corasick method for transforming pattern matched XML document from one XML form to another because by doing so pattern matching and automatic, dynamic document transformation could have been performed at the same time since XML is such a common language and the dynamic transformation would have further improved the performance of the cache queryable and cached database system implemented from the combined Cusson-Biderman reference.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 23-24 are rejected under 35 U.S.C. 102(e) as anticipated by Bidermane et al. (U.S. Publication 2001/0037325, hereafter "Biderman").

As per claim 23, Biderman teaches the following:

“receiving plural character string text search requests including corresponding search variables” (See Figs. 4a-4b and Page 5, [0058] wherein Biderman’s navigation string and search keywords are received is equivalent to Applicant’s receiving plural character string text search requests including corresponding search variables);

“combining the requests into a combined retrieval pattern including the search variables of the requests” (See Figs. 4a-4b and Page 5, [0053]-[0058] wherein Biderman’s the navigation string and keywords are combined for the search and retrieval is equivalent to Applicant’s combining the requests into a combined retrieval pattern including the search variables of the requests); and

“performing search using the combined retrieval pattern” (See Figs. 5-6 and Page 5, [0062] wherein Biderman’s a search is performed based on the retrieved navigation strings and keywords is equivalent to Applicant’s performing search using the combined retrieval pattern).

As per claim 24, Biderman teaches the following:

“receiving plural character string text search requests including corresponding search variables” (See Figs. 4a-4b and Page 5, [0058] wherein Biderman’s navigation string and search keywords are received is equivalent to Applicant’s receiving plural character string text search requests including corresponding search variables);

“storing the variables in a corresponding table with corresponding search request identifiers” (See Page 5, [0057]-[0058] wherein Biderman’s client machine information is retrieved for returning the matching entries to display and the retrieval condition, the

navigation string, to parse for extracting protocol, host name, port, path and search string for keywords and categories to store in the navigation and search databases is equivalent to Applicant's storing the variables in a corresponding table with corresponding search request identifiers);

"combining the requests into a combined retrieval pattern including the search variables of the requests" (See Figs. 4a-4b and Page 5, [0053]-[0058] wherein Biderman's the navigation string and keywords are combined for the search and retrieval is equivalent to Applicant's combining the requests into a combined retrieval pattern including the search variables of the requests); and

"performing search using the combined retrieval pattern" (See Figs. 5-6 and Page 5, [0062] wherein Biderman's a search is performed based on the retrieved navigation strings and keywords is equivalent to Applicant's performing search using the combined retrieval pattern).

Response to Arguments

9. Applicant's remarks on the discrepancy between the Cusson et al (U.S. Patent 6,487,641) reference with its U.S. Patent Number is appreciated. The error has been properly corrected in the Supplemental non-Final Office Action as previously described. As to Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection. The currently amended claims 23-24 have been rejected together with claims 1-22 as previously described in the Supplemental non-Final Office Action.

Conclusions

10. The prior art made of record

A. U.S. Publication 2001/0037325

B. U.S. Patent No. 6,487,641

C. U.S. Patent No. 6,487,566

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

D. U.S. Patent No. 6,029,165

E. U.S. Patent No. 6,385,605

F. U.S. Patent No. 6,526,400

G. U.S. Patent No. 6,584,465

H. U.S. Patent No. 6,493,705

I. U.S. Patent No. 6,094,647

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuen S Lu whose telephone number is 571-272-4114.

The examiner can normally be reached on 8 AM to 5 PM, Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on 571-272-4107. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Kuen S. Lu



Patent Examiner

November 2, 2004


Luke Wassum

Primary Examiner

November 2, 2004